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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,107	04/10/2001	Edwin Dair	3918P002XX3	6467

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EXAMINER

BELLO, AGUSTIN

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 08/12/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,107

Applicant(s)

DAIR ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-98 is/are pending in the application.
4a) Of the above claim(s) 7-92 is/are withdrawn from consideration.
5) ☒ Claim(s) 93-98 is/are allowed.
6) ☒ Claim(s) 1-6 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/13/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I in the reply filed on 5/13/04 is acknowledged. The traversal is on the ground(s) that claims 40-42 are generic. This is not found persuasive because claims 40-42 recite first and second optical blocks which are not shown in all of the figures. Similarly, the applicant's assertion that claims 1-23, 40-63, and 89-98 read on the elected species has been considered but is not found persuasive because the figures selected fail to show first and second cutouts, electrical components between the optoelectronic device, a ground plane, first optical block, second optical block, a single optical block, a pair of optical blocks, etc. The claims recite many different elements that are not shown in the figures of the elected species. As such, the examiner provides this office action based on the claims that truly read on the figures of the elected species. These claims are claims 1-6 and 93-98.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi (U.S. Patent No. 6,086,265) in view of Scharf (U.S. Patent No. 6,369,924).

Regarding claim 1, Kuribayashi teaches a fiber optic module (Figure 3A) for coupling photons between optoelectronic devices (reference numeral 30 in Figure 3A) and optical fibers (reference numeral 120 in Figure 3A), the fiber optic module comprising: a base (reference numeral 20 in Figure 3A), a first horizontal printed circuit board (PCB) (reference numeral 140

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in Figure 3A) arranged horizontally with the base and parallel to a first optical axis of a first optoelectronic device (reference numeral 40 Left in Figure 11A), the first optoelectronic device having terminals coupled to the first horizontal printed circuit board (reference numeral 77 in Figure 11A); and a second vertical printed circuit board (PCB) (reference numeral 37 in Figure 3A and reference numeral 76 in Figure 10A) arranged at a perpendicular angle with the base), the second optoelectronic device having terminals (reference numeral 75 in Figure 10A) coupled to the second vertical printed circuit board. Kuribayashi differs from the claimed invention in that Kuribayashi fails to specifically teach that the second vertical printed circuit board is parallel to a second optical axis of a second optoelectronic device. However, this board configuration is well known in the art. Scharf, in the same field of optical modules, teaches a vertical printed board having an axis parallel to the optical axis of an optoelectronic device (reference numeral 36, 44 in Figure 6). One skilled in the art would have been motivated to implement the board design of Scharf in the system of Kuribayashi in order to reduce the overall size of the fiber optical module. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to position the second board of Kuribayashi vertically as taught by Scharf so that the axis of the board were parallel to the optical axis of the optoelectronic device.

Regarding claim 2, Kuribayashi teaches a housing (reference numeral 130A in Figure 3A) coupled to the base.

Regarding claim 3, Kuribayashi differs from the claimed invention in that Kuribayashi fails to specifically teach that the housing is a shielded housing to encase the first and second printed circuit boards to reduce electromagnetic interference (EMI). However, Scharf teaches that housing (reference numeral 30 in Figure 2) which reduces EMI. One skilled in the art would have been motivated make the housing of Kuribayashi of the type taught by Scharf in order to

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prevent electromagnetic interference. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to make the housing of Kuribayashi like the housing of Scharf in order to reduce EMI.

Regarding claim 4, the combination of Kuribayashi and Scharf teaches that the housing has an inner septum (reference numeral 35 in Figure 4 of Scharf) to separate the fiber optic module into a first side and a second side and the inner septum is a conductive shield to reduce crosstalk electromagnetic radiation (column 4 lines 40-44).

Regarding claim 5, the combination of references teaches the base has a first and second opening (reference numeral 39 in Figure 3A of Kuribayashi); the first horizontal printed circuit board has a plurality of pins extending through the first opening (reference numeral 38 in Figure 3A of Kuribayashi) in the base to couple to a host printed circuit board (reference numeral 26 in Figure 3B of Kuribayashi) ; and the second vertical printed circuit board has a plurality of pins (reference numeral 40 in Figure 2 of Scharf) extending through the second opening in the base to couple to the host printed circuit board (reference numeral 22 in Figure 1 of Scharf).

Regarding claim 6, the combination of references and Scharf in particular teaches that the first and second openings in the base are a plurality of pin holes (as seen in Figure 6).

Allowable Subject Matter

4. Claims 93-98 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or fully suggest a horizontal printed circuit board (PCB) arranged horizontally having a first plurality of pins and a second plurality of pins to couple to a host printed circuit board and a first optoelectronic device having terminals coupled to the horizontal printed circuit board, a vertical printed circuit board (PCB) coupled to the horizontal printed

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circuit board arranged at a perpendicular angle and parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the vertical printed circuit board; and a housing coupled to the horizontal printed circuit board. In particular the prior art fails to teach or fully suggest that a vertical printed circuit board coupled to a horizontal printed circuit board.

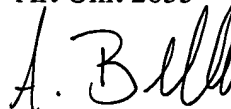
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (703)308-1393. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Agustin Bello
Examiner
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